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09/341,994	10/28/1999	ROBERT J. FRETZ	022577-579	5901

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EXAMINER

DABNEY, PHYLESIA LARVINIA

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 06/17/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

11

# Office Action Summary

Application No.

09/341,994

Applicant(s)

FRETZ ET AL

Examiner

Phylesha L Dabney

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 27 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-7, 9-14, 17-32 is/are rejected.
- 7) ☐ Claim(s) 8 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This action is in response to the amendment filed on 3 April 2003 in which claims 1-32 are pending.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 13, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Arndt (U.S. Patent No. 5,204,917).

*ALW* Regarding claim 13, Arndt discloses a hearing aid case (figs. 1-17) comprising a case body (10) containing a microphone (16), a processor unit (18), and a speaker (14); a battery (20); a tube attachment end (near 80) including an end surface (tip of 80), a nipple (80), a side surface (side of 80), a key (screw threads of 80).

Regarding claim 14, Arndt discloses a hearing aid case (figs. 1-17) comprising a case body (10) containing a microphone (16), a processor unit (18), and a speaker (14); a battery (20); a tube attachment end (12) including an end surface, a nipple (end of 12), a side surface (side of 12), a key (indentation of 12); wherein the nipple includes a circumferential ring (end of 12 beyond the indentation) for retaining the hearing aid tube in a snap fit.

Art Unit: 2643

Regarding claim 16, as shown in figures 1A and 1B, Arndt discloses the end surface (tip of 80) is substantially perpendicular to the side surface (side of 80).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pluvinae et al (U.S. Patent No. 5,987,146).

Regarding claim 20, Pluvinae teaches a hearing aid housing (40), an eartip (12), a hearing aid tube (10, 10/30). Pluvinae does not teach a means for assembling the eartip and tube; however, the examiner takes official notice that it is known to use tools, such as pliers, extracting tools, holders, or the like for assembling/disassembling hearing aid parts to ease manipulations of the one small component relative to other. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a tool to assemble the small tube and eartip as suggested by column 4 lines 43-53) for ease of manipulation of one component relative to the other.

3. Claims 1-7, 9-12, 17-19, 21-25, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pluvinae et al (U.S. Patent No. 5,987,146), in view of the applicant's specification, and further in view of Ward (U.S. Patent No. 5,201,007).

Art Unit: 2643

Regarding claim 1, Pluinage teaches a hearing aid system comprising a hearing aid case (40), a tube (10 or 10/30) having a first end and second ends (fig. 1) with a first and second bend (fig. 5, a-c), and an ear tip (12). Pluinage does not teach the tube is sufficiently rigid such that a 1 inch segment of the tube is not deflected 0.1 inch by a force of 1 gram or less. The applicant's specification teaches that tubing made of PVC and the like would exhibit a durometer hardness of about 65 to 85 Shore D and be sufficiently rigid such that a 1 inch segment of the tube would not be deflected by a force of 1 gram or less (page 9 line 24 to page 10 line 20). Ward teaches formulate tubing used in behind-the-ear hearing aids to direct sound into the ear canal from materials (col. 5 lines 13-16), such as PVC, silicon, etc., for prevent corrosive damage to the ear. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use PVC material to construct the tubing used in the Pluinage invention, as taught by the applicant's specification and Ward, for providing stiffness while preventing corrosive damage to the ear.

Regarding claims 2-5, 9-10, and 12, see the rejection of claim 1.

Regarding claim 6, Pluinage does not teach the hearing aid case including a battery having a mass of 1.5 grams or less. However, the Examiner takes official notice that it is notoriously well-known in the art for a BTE hearing aid to include a battery, i.e. Nicad or lithium or nickel-metal-hydride, having a mass of 1.5 grams or less for providing power without requiring a lot of space. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a battery as claimed for supplying power.

Regarding claim 7, Pluinage teaches the case including a tube attachment end (30, 32) including: an end surface for abutting the first end of the tube (fig. 1), a nipple (30), a side

Art Unit: 2643

surface for abutting a side surface of the tube (fig. 1), a key (32) extending along the side surface in a direction substantially parallel to the longitudinal axis of the nipple, the key arranged to maintain a proper orientation between the case and the tube when the tube is connected to the case.

Regarding claim 11, Pluinage does not teaches the tube being formed at high temperature to retain the first and second bend. However, the examiner takes official notice that it is known in chemical processing to heat plastic materials at high temperatures to make them malleable, and cool this plastic into rigid structure, such as the tube of Pluinage, to promote proper fit and alignment. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the tube of Pluinage at high temperature to make it malleable and cool this tubing into a rigid structure to promote proper fit and alignment with the ear of the user.

Regarding claims 17-19, Pluinage does not teach a kit of parts with a plurality of tubes, eartips, and hearing aid cases. However, the Examiner takes official notice that it is well-known in the art that individual's ears are not universal which requires different size hearing parts for fit and comfort of each individual. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for an audiologist during testing and fitting of hearing aid parts to different users to have multiple tubes, eartips, and cases for servicing different patients. In addition, Pluinage does not teach the tube is sufficiently rigid such that a 1 inch segment of the tube is not deflected 0.1 inch by a force of 1 gram or less. The applicant's specification teaches that tubing made of PVC and the like would exhibit a durometer hardness of about 65 to 85 Shore D and be sufficiently rigid such that a 1 inch segment of the tube would

Art Unit: 2643

not be deflected by a force of 1 gram or less (page 9 line 24 to page 10 line 20). Ward teaches formulate tubing used in behind-the-ear hearing aids to direct sound into the ear canal from materials (col. 5 lines 13-16), such as PVC, silicon, etc., for prevent corrosive damage to the ear. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use PVC material to construct the tubing used in the Pluvinage invention, as taught by the applicant's specification and Ward, for providing stiffness while preventing corrosive damage to the ear.

Regarding claim 21, Pluvinage teaches a hearing aid device comprising an eartip (12) and a tube (10 or 10/30). Pluvinage does not teach the tube is sufficiently rigid such that a 1 inch segment of the tube is not deflected 0.1 inch by a force of 1 gram or less. The applicant's specification teaches that tubing made of PVC and the like would exhibit a durometer hardness of about 65 to 85 Shore D and be sufficiently rigid such that a 1 inch segment of the tube would not be deflected by a force of 1 gram or less (page 9 line 24 to page 10 line 20). Ward teaches formulate tubing used in behind-the-ear hearing aids to direct sound into the ear canal from materials (col. 5 lines 13-16), such as PVC, silicon, etc., for prevent corrosive damage to the ear. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use PVC material to construct the tubing used in the Pluvinage invention, as taught by the applicant's specification and Ward, for providing stiffness while preventing corrosive damage to the ear.

Regarding claim 22, Pluvinage teaches the eartip (12) having a flower-shape with a plurality of petals (21).

Art Unit: 2643

Regarding claim 23, Pluinage teaches the eartip (12) including a single blade (14) extending from a central core configured so that the blade fits behind the ear tragus (fig. 5b).

Regarding claim 24, Pluinage teaches the eartip (12) having a conically-shaped member (12) having a first cross sectional dimensional smaller than the second cross sectional dimension (figs. 1, 5b, 4a-d).

Regarding claim 25, Pluinage teaches an eartip (12) having a dome-shaped member (fig. 3) having an annular skirt (fig. 3).

Regarding claim 27, Pluinage teaches the device comprising a behind the ear (BTE) hearing aid case (40) attached to the first end of the tube (10 or 10/30).

Regarding claim 28, Pluinage teaches a portion (30) of the tube (10, 30) extends over the ear of the user.

Regarding claim 29, Pluinage teaches the eartip (12) including a wax guard (18a-b).

Regarding claims 30-32, Pluinage does not teach or restrict the construction of the eartip (12) or the tube for permitting optimal adjustment of these components (col. 5 lines 15-19). The examiner takes official notice that it is known to include grooves and ribs, such as male/female screw threads, respectively on these components as a means of removable attaching the eartip and tube together, thereby permitting adjustments. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use grooves and ribs in the invention of Pluinage to connect the eartip and tube for permitting adjustments.

4. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Pluinage (U.S. Patent No. 5,987,146), in view of Harada (U.S. Patent No. 3,934,100).



Regarding claim 26, Pluvinage does not teach the dome-shaped member eartip having vents. Harada teaches including vents in a dome-shaped member of an eartip for increasing or reducing the amplitude of sounds. Therefore, it would have been obvious to one of ordinary skill in the art to include vents in the dome-shaped member of the eartip of Pluvinage, as taught by Harada, for reducing the amplitude of sounds.

### ***Response to Arguments***

5. Applicant's arguments filed 4/3/2003 with respect to claims 13 and 16 have been fully considered but they are not persuasive. Per the applicant's fig. 6, the key is an annular raised piece located on the nipple. Arndt teaches threads along the side of the nipple which satisfy this requirement.

6. Applicant's arguments with respect to claims 1,12, 17, and 21, wherein new limitations "tubes sufficiently rigid such that a 1 inch segment of the tube is not deflected 0.1 inch by a force of 1 g or less" have been added, have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

7. Claims 8 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2643

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415.

The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

(703) 306-0377, for customer service questions.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

PLD

June 15, 2003

  
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